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ORIGINAL
(Red)

R-51-9-2-5

FIELD TRIP REPORT

PHILLIPS LANDFILL

EPA WORK ASSIGNMENT NO. 37-38-3JZZ
PROJECT NO. 3738-06
EPA DSN PA-0076
FACILITY ID NO. PAD980706964

ARCS III PROGRAM
EPA CONTRACT NO. 68-W8-0037

SEPTEMBER 1992

HALLIBURTON NUS
Environmental Corporation

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FOR THE
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SEPTEMBER 10, 1992

SUBMITTED BY

(b) (4)

REVIEWED AND APPROVED BY

(b) (4)

1.0 FIELD TRIP REPORT

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1.1 SUMMARY

On August 18 and 19, 1992, HALLIBURTON NUS ARCS III staff members (b) (4)(b) (4), (b) (4) (b) (4)(b) (4)(b) (4)(b) (4)(b) (4)(b) (4)(b) (4)(b) (4) conducted a site inspection prioritization sampling visit at Phillips Landfill in Stowe and Kennedy Townships, Allegheny County, Pennsylvania (see figure 1, attachment 1). The weather was sunny and cloudy, with winds light and variable. Temperatures ranged from approximately 70°F to 85°F. Photographs were taken on site.

A total of 11 low-concentration aqueous samples, four filtered low-concentration aqueous samples, eight low-concentration solid samples, and three low- to medium-concentration solid (waste) samples, including blanks and duplicates, were obtained during the inspection (see figure 3, attachment 1, and attachment 2). Split samples were obtained for certain samples by consultants for Phillips Landfill and Slag, Incorporated, the owner.

A pre-sampling reconnaissance was conducted at the site on June 23, 1992.

Deviations from the Sampling Plan

- Proposed sample SD-1 was not obtained because the sampling location was inaccessible for sediment sampling with the equipment available (below grade in a manhole).
- Proposed sample MW-A was not obtained because the well exhibited an explosive atmosphere even after it was allowed to ventilate for about 21 hours.
- Proposed sample HW-1 was not obtained because the house where the well was reported to be located no longer existed.

1.2 PERSONS CONTACTED

1.2.1 Prior to Field Trip

Michael Giuranna
U.S. EPA
841 Chestnut Building
Philadelphia, Pennsylvania 19107
(215) 597-3165

James Shack
Pennsylvania Department of
Environmental Resources
400 Waterfront Drive
Pittsburgh, Pennsylvania 15222-4745
(412) 442-4136

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1.2.1 Prior to Field Trip (continued)

Jake Phillips, Jr.
Phillips Landfill and Slag, Incorporated
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McKees Rocks, Pennsylvania 15136
(412) 787-2212

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Golder Associates, Incorporated
2000 Corporate Drive, Suite 300
Wexford, Pennsylvania 15090
(412) 934-4300

Pauline McConahy
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1.2.2 At the Site

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Kevin Wilmont
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1.2.3 Post Site Visit

Michael Giuranna
U.S. EPA
841 Chestnut Building
Philadelphia, Pennsylvania 19107
(215) 597-3165

1.2.4 Water Supply Well Information

No off-site wells were sampled during the site inspection.

1.3 SITE OBSERVATIONS

- HNU photoionization detectors were used. A positive reading was recorded when monitoring well MW-A was opened (2.2 to 2.4 ppm above background using an 11.7 eV lamp). Using an MSA 261 combustible gas/oxygen indicator (CGI), a reading of greater than 100 percent of the lower explosive limit (LEL) was obtained. The well was allowed to ventilate for about 21 hours; the same CGI reading persisted. No other readings above background were recorded on site.

- The radiation mini-alert was set on the X1 position; no readings above background were recorded on site.

- The site is an inactive solid waste landfill.

- The site property consists of approximately 166 acres (see figure 2, attachment 1). The site comprises three areas of concern. The permitted landfill consists of about 40 acres. The cement dust area consists of about 22 acres. The slag yard consists of about three acres; this slag-filled area is actively used for the storage for sale of slag, recycled concrete, gravel, soil, and similar materials.

- The permitted landfill had chain-link fence along the roads on the northern and eastern sides, with a gate that was locked on each of the two sides. Other possible access routes into the landfill were blocked with mounds of soil, as was the access route to the cement dust area.

- A large pile of light gray powder (reportedly baghouse dust from cement kilns) was observed at the cement dust area. There was also a small pile of black sand (reportedly foundry sand) at this area.

- A fine, light brown sediment was observed in the cement dust area underdrain, just upstream from its confluence with the permitted landfill underdrain.

- There were two buildings and two office trailers at the slag yard and no other buildings on site.

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- The sampling location for SW-1 and proposed SD-1 (slag yard underdrain upstream samples) was below grade in a manhole. A vertical five-foot-diameter concrete pipe topped with wire mesh projected upward from a hollow in the ground surface. The water level was 55.5 feet below the top of the pipe.

- Small amounts of municipal-type waste and demolition debris were observed mixed with the cover soil on the permitted landfill.

- Certain locations (notably MW-A, MW-B, and the downstream end of the slag yard underdrain) exhibited an odor similar to decaying organic material mixed with a petroleum-like odor.

- There were three active monitoring wells on site: two along the perimeter of the permitted landfill and one across the road, north of the permitted landfill. They had inner casings of four-inch-diameter polyvinyl chloride (PVC). Two wells were sounded, and the following information was obtained:

MW-A

Not sounded or purged due to explosive atmosphere

MW-B

Depth from top of casing (TOC) to water	3.8 feet
Depth from TOC to bottom of well	16.5 feet
Casing stickup	0.7 foot
Depth from ground surface to water	3.1 feet
Depth from ground surface to bottom of well	15.8 feet
Depth of water in well	12.7 feet
Volume of water in well (0.653 gallon per foot for a four-inch well)	8.29 gallons
Minimum volume required to be purged (3x volume)	24.88 gallons
Actual volume purged (approximate)	25.0 gallons

MW-C

Depth from TOC to water	24.0 feet
Depth from TOC to bottom of well	45.1 feet
Casing stickup	2.5 feet
Depth from ground surface to water	21.5 feet
Depth from ground surface to bottom of well	42.6 feet
Depth of water in well	21.1 feet
Volume of water in well (0.653 gallon per foot for a four-inch well)	13.77 gallons
Minimum volume required to be purged (3x volume)	41.31 gallons
Actual volume purged (approximate)	41.31 gallons

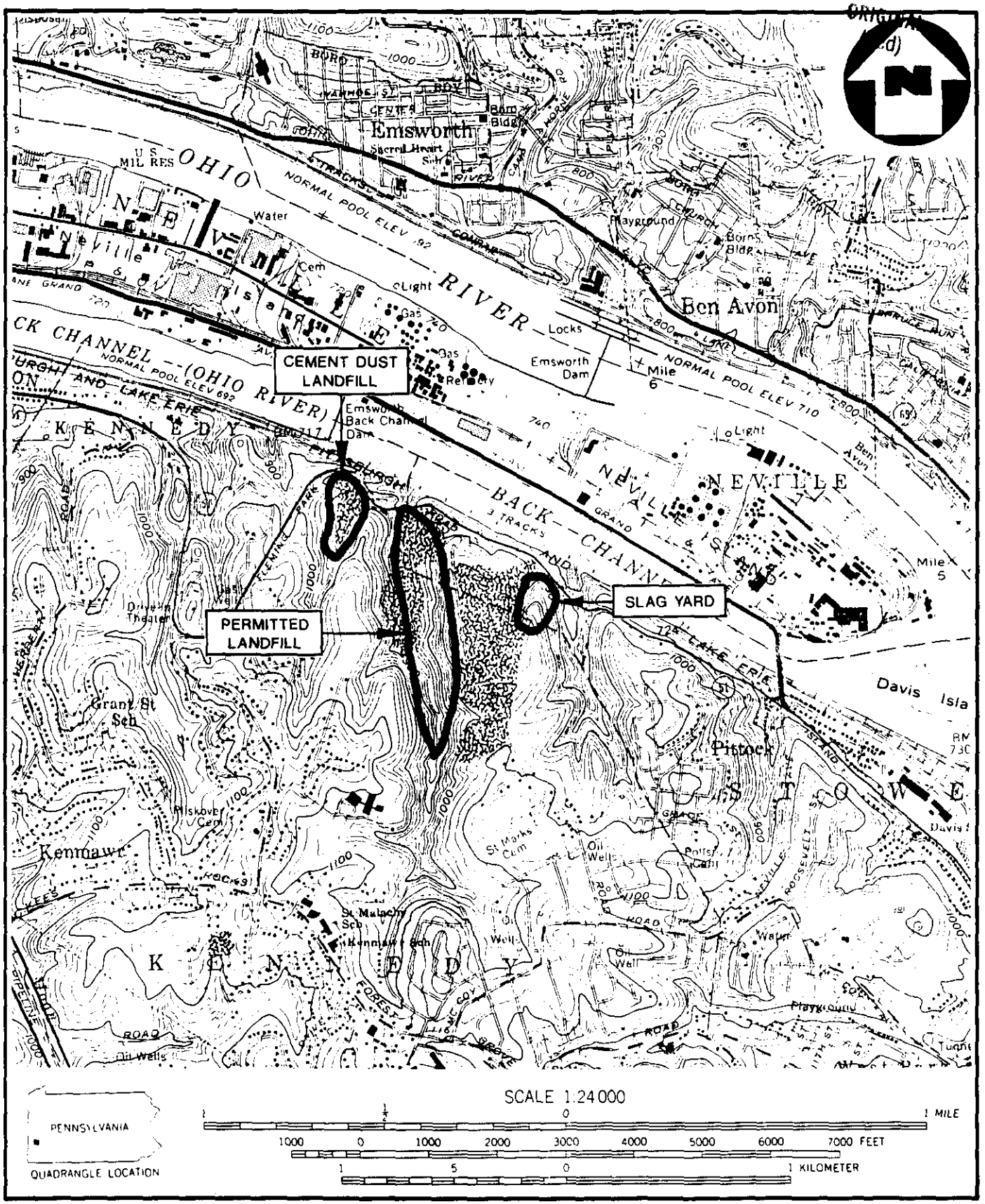
- The site slopes generally downward from south to north, with a difference in elevation of approximately 100 feet between the high and low ends. Each area of concern is a filled area of a stream valley; the streams draining the permitted landfill and the cement dust area meet before flowing into the Ohio River back channel. Site surface drainage would be expected to flow northward into the Ohio River back channel.

- A railroad separates the Phillips property from the Ohio River back channel. The streams flow through culverts under the railroad.

- The site is bordered primarily by woodlands. The Sto-Ken-Rox baseball field and residential areas border the site to the southeast and south.

- Site roadways were unpaved. The slag yard and the cement dust area were largely unvegetated, with dead trees in the cement dust area. The permitted landfill is somewhat vegetated, with herbaceous plants on the landfill itself and brush and trees surrounding it.

ATTACHMENT NO. 1



SOURCE: (7.5 MINUTE SERIES) U.S.G.S. PITTSBURGH WEST & EMSWORTH, PA., QUADS.

FIGURE:

SITE LOCATION MAP

PHILLIPS LANDFILL AND SLAG, INC.

(SCALE 1:24000)

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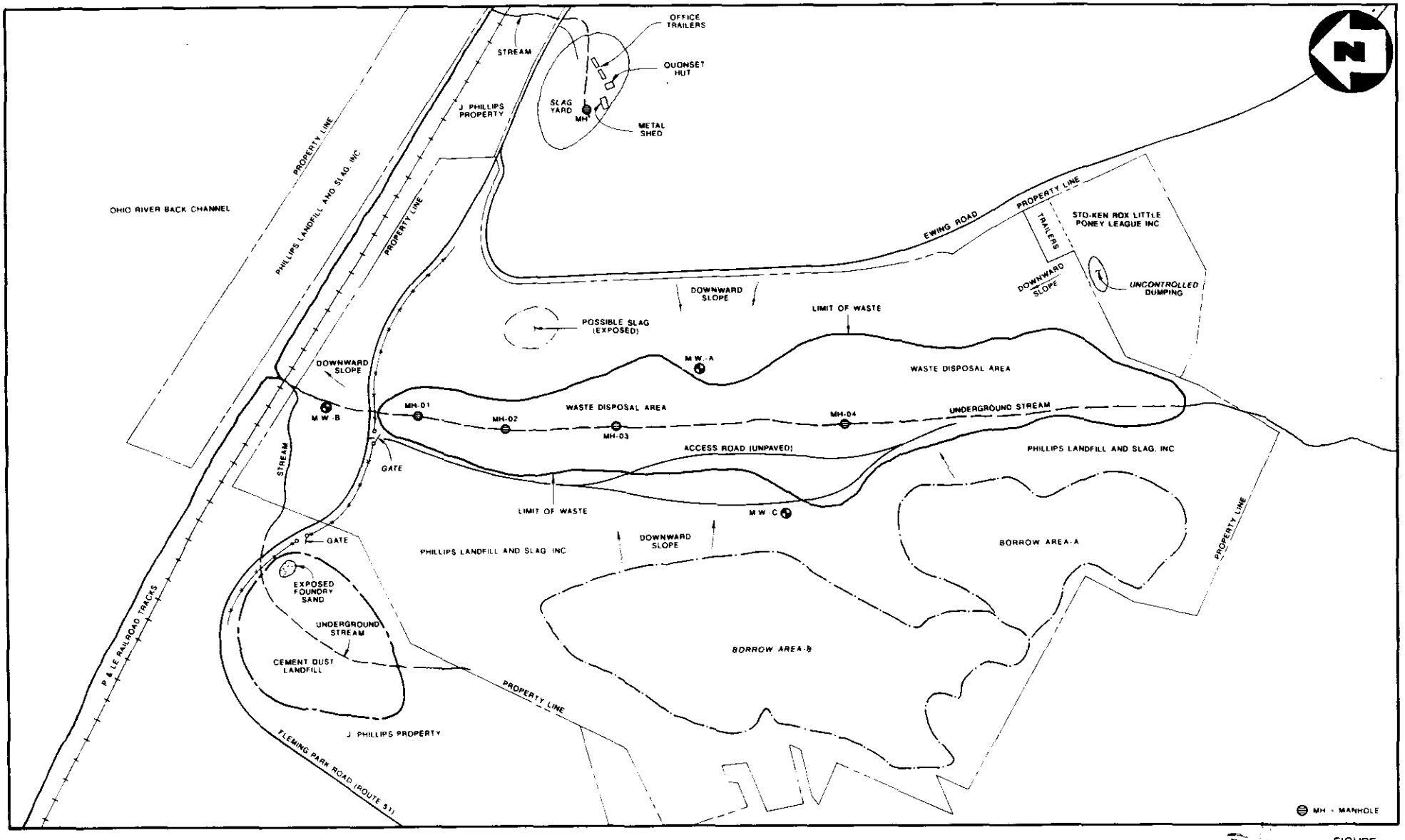

SITE SKETCH

PHILLIPS LANDFILL AND SLAG, INC.

(NO SCALE)

FIGURE:

HALLIBURTON NUS
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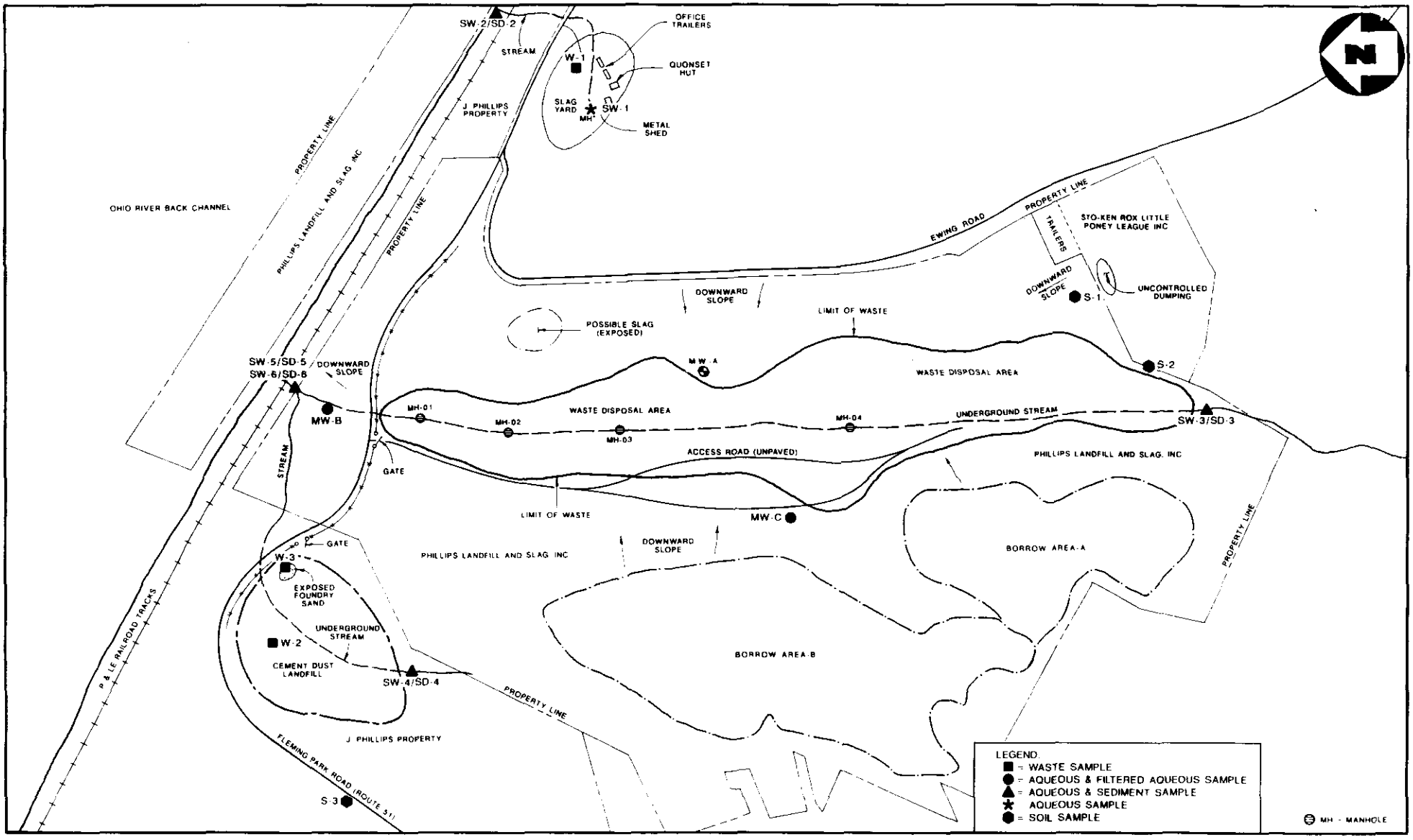

SAMPLE LOCATION MAP

PHILLIPS LANDFILL AND SLAG, INC.

(NO SCALE)

FIGURE

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FINAL

ATTACHMENT NO. 2

Project
~~TDD~~ NUMBER 3738.0604
EPA NUMBER PA-0076

SAMPLE LOG

SITE NAME Phillips L/F

TRAFFIC REPORTS Organic	Inorganic	High Hazard	SAMPLE IDENTIFIER	PHASE	SAMPLE DESCRIPTION	SAMPLE LOCATION	TARGET USE	pH	FIELD MEASUREMENTS
CGG70	MCHG01		MW-B	Aq	foamy, brown, cloudy, odorless	north (downhill) from main L/F	none	7.31	—
CGG71	MCHG02		MW-D	Aq	dup. MW-B	"	none	7.19	—
CGG82	MCHG13		MW-C	Aq	clear, colorless, odorless w/ insects	W of main L/F	none	7.18	—
—	MCHG23		MW-BF	AqF	MW-B filtered sample	same as MW-B	none	—	—
—	MCHG24		MW-DF	AqF	dup. MW-BF	"	none	—	—
—	MCHG25		MW-CF	AqF	MW-C filtered sample	same as MW-C	none	—	—
CGG84	MCHG16		SW-1	Aq	clear, odorless, some susp sediment	slag yard underdrain upstream (down access pipe)	downstream fishery, drinking water, recreation	7.14	—
CGG85	MCHG17		SW-2	Aq	clear, odorless, foam	slag yard underdrain downstream ~75' S of Chisholm Bark Ck.	"	7.87	—
CGG75	MCHG06		SW-3	Aq	clear colorless, odorless	main L/F underdrain upstream	"	7.93	—
CGG74	MCHG05		SW-4	Aq	clear, colorless, odorless	cement dust pile underdrain upstream	"	8.11	—

Project ~~TDD~~ NUMBER 3738.0604

EPA NUMBER PA-0076

SAMPLE LOG

SITE NAME Phillips L/F

TRAFFIC REPORTS: Organic	Inorganic	High Hazard	SAMPLE IDENTIFIER	PHASE	SAMPLE DESCRIPTION	SAMPLE LOCATION	TARGET USE	pH	FIELD MEASUREMENTS
CGG76	MCHG07		SW-5	Aq	tan-orange, suds	main L/F/cement dust underdrain downstream ~50' S. of [illegible]	downstream fishing, drinking water, recreation	8.60	—
CGG77	MCHG08		SW-6	Aq	dup SW-5	"	"	8.67	—
CGG23	MCHG14		Aq. Blk.	Aq	field blank	—	none	—	—
—	MCHG15		Filt. Blk.	Aq F	field filtered blank	—	none	—	—
CGG91	—		Trip Blk. for solid samples	Aq	VOA blank	—	none	—	—
CGG86	MCHG18		SD-2	Sol	dark brown, odorless sandy, silty clay w/ coal fragments	same as SW-2	downstream fishing, drinking water, recreation	—	—
CGG87	MCHG19		SD-3	Sol	brown, sandy silt w/ pebbles	Same as SW-3	"	—	—
CGG78	MCHG09		SD-4	Sol	brown w/ small pebbles	same as SW-4	"	—	—
CGG79	MCHG10		SD-5	Sol	tan-brown-red gravel w/ fine sediment	same as SW-5 + SW-6	"	—	—
CGG80	MCHG11		SD-6	Sol	dup. SD-5	"	"	—	—

Project
~~TDD~~ NUMBER 3738.0604
EPA NUMBER PA-0076

SAMPLE LOG

SITE NAME Phillips L/F

TRAFFIC REPORTS Organic	Inorganic	High Hazard	SAMPLE IDENTIFIER	PHASE	SAMPLE DESCRIPTION	SAMPLE LOCATION	TARGET USE	pH	FIELD MEASUREMENTS
CGG81	MCHG12		W-1	Sol	tan, granular; (Slag w/other debris)	SW edge of slag yard	bulk material sales/storage		
CGG72	MCHG03		W-2	Sol	gray, some org. mat'l. (cement dust)	cement dust pile.	waste pile		
CGG73	MCHG04		W-3	Sol	fine, black (foundry sand)	NE of cement dust pile	waste pile		
CGG88	MCHG20		S-1	Sol	brown w/pebbles, silt, sand	W/downhill from Sto-Ken Rox; SW of main L/F	closed L/F buffer		
CGG89	MCHG21		S-2	Sol	light brown, clayey w/silt, stones	SW/downhill from Sto-Ken Rox; SW of main L/F	closed L/F buffer		
CGG90	MCHG22		S-3	Sol	dark brown silty clay w/org. matl.	W of site; 50' E of Rt. 51	background soil		

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